AUTHOR INDEX TO VOLUME 124

Achasov, O.V., see S. De Benedictis 124 (1988) 91
Amirav, A., Rotational and vibrational energy effect on energy-resolved emission of anthracene and 9-cyanoanthracene 124 (1988) 163
Amos, A.T., see K.W. Sulston 124 (1988) 411
Anisimov, O.A., see S.N. Smirnov 124 (1988) 81
Atanasov, M.A. and H.-H. Schmidtke, The angular overlap model for transition metal compounds forming extended structures 124 (1988) 205

Barnes, L.A., see C.W. Bauschlicher Jr. 124 (1988) 383
Bauschlicher Jr., C.W. and L.A. Barnes, On the dissociation energies and bonding in $NiCO^+$ and $TiCO^+$ 124 (1988) 383
Bawagan, A., see A.M. Grisogono 124 (1988) 121
Bencivenni, L., see F. Ramondo 124 (1988) 291
Billing, G.D. and G.H.F. Diercksen, Rate constants for the rotational excitation of ammonia colliding with rotationally excited hydrogen 124 (1988) 77
Bin Hussein, M.Z., see J.M. Hollas 124 (1988) 297
Botter, R., see X. Ripoche 124 (1988) 305
Breen, J.J., K. Kilgore, K. Stephan, R. Hofmann-Sievert, B.D. Kay, R.G. Keesee, T.D. Märk and A.W. Castleman Jr., The use of similarity profiles in studying cluster formation in molecular beams: evidence for the role of pre-existing dimers. Erratum 124 (1988) 161
Breitenstein, M., H. Meyer and A. Schweig, Molecular electron pair distributions and electron repulsion energies 124 (1988) 47
Brion, C.E., see A.M. Grisogono 124 (1988) 121
Burris, J., J.J. Butler, T.J. McGee and W.S. Heaps, Collisional deactivation rates for $A^2\Sigma^+(v'=1)$ state of OH 124 (1988) 251
Butler, J.J., see J. Burris 124 (1988) 251

Cacelli, I., Theoretical study of the dissociation of the HF^+ and DF^+ ions in the $B^2\Sigma^+$ state by classical trajectories 124 (1988) 347
Castleman Jr., A.W., see J.J. Breen 124 (1988) 161
Colpa, J.P., see J. Rowat 124 (1988) 1
Cox, J.R. and I.H. Hillier, Ab initio MO studies of the decomposition of energetic materials. I. Hydrogen transfer in TNT and in model systems 124 (1988) 39
Cramarossa, F., see S. De Benedictis 124 (1988) 91

Darrach, M., see P.W. Zetner 124 (1988) 453
Davison, S.G., see K.W. Sulston 124 (1988) 411
De Benedictis, S., F. Cramarossa and O.V. Achasov, Homogeneous and heterogeneous CO chemical kinetics in liquid-nitrogen cooled 5% CO–He discharges 124 (1988) 91
Diercksen, G.H.F., see G.D. Billing 124 (1988) 77
Dimicoli, I., see X. Ripoche 124 (1988) 305

Domcke, W., see G. Stock 124 (1988) 227
Dräger, G., see W. Gädeke 124 (1988) 113

Elich, K., see R. Wortmann 124 (1988) 395

Fillaux, F., J. Tomkinson and J. Penfold, Proton dynamics in the hydrogen bond. The inelastic neutron scattering spectrum of potassium hydrogen carbonate at 5 K 124 (1988) 425
Fink, W., H. Radkowitsch and E.W. Lang, The *p*, *T*, *c* dependence of deuterium spin–lattice relaxation times in undercooled $NaCl/D_2O$ and NaI/D_2O solutions 124 (1988) 239
Fischer, H., see J.-K. Vollenweider 124 (1988) 333
Flament, J.P., see M. Tadjeddine 124 (1988) 13
Frahm, R., see W. Gädeke 124 (1988) 113
Fueno, T., M. Fukuda and K. Yokoyama, Mechanism of the reaction $NH(^1\Delta)+NO\rightarrow N_2O+H$ in the gas phase 124 (1988) 265
Fukuda, M., see T. Fueno 124 (1988) 265
Fukuda, Y., see R. Yano 124 (1988) 315

Gädeke, W., E.E. Koch, G. Dräger, R. Frahm and V. Saile, Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy 124 (1988) 113
Gelfand, J., see T.G. Kreutz 124 (1988) 359
Grimbert, D., B. Lassier-Govers and V. Sidis, Model potentials and related diabatic states for the $H^+ + O_2$ collisional system 124 (1988) 187
Grisogono, A.M., R. Pascual, E. Weigold, A. Bawagan, C.E. Brion, P. Tomasello and W. von Niessen, Orbital momentum distributions and binding energies for the complete valence shell of molecular iodine 124 (1988) 121
Gundlach, G., E.L. Knuth, H.-G. Rubahn and J.P. Toennies, Cross sections for translational and rotational relaxation in Li/Li_2 and Na/Na_2 molecular beams 124 (1988) 131
Guth, J.R. and A.C. Hess, Structural and vibrational properties of neopentane and tetramethylsilane using ab initio MO calculations 124 (1988) 29

Hammond, P., see P.W. Zetner 124 (1988) 453
Harris, J.M., see X.R. Zhu 124 (1988) 321
Hashi, T., see R. Yano 124 (1988) 315
Heaps, W.S., see J. Burris 124 (1988) 251
Hess, A.C., see J.R. Guth 124 (1988) 29
Hillier, I.H., see J.R. Cox 124 (1988) 39
Hofmann-Sievert, R., see J.J. Breen 124 (1988) 161
Hollas, J.M. and M.Z. bin Hussein, The $\tilde{A}\,^1B_{2u}$–$\tilde{X}\,^1A_g$ electronic absorption spectrum of 1,2,4,5-tetrafluorobenzene: rotational band contour and vibrational analysis relating to non-planarity in the $\tilde{A}$ state 124 (1988) 297

Kay, B.D., see J.J. Breen 124 (1988) 161
Keesee, R.G., see J.J. Breen 124 (1988) 161
Kilgore, K., see J.J. Breen 124 (1988) 161
Knuth, E.L., see G. Gundlach 124 (1988) 131
Koch, E.E., see W. Gädeke 124 (1988) 113

Kreutz, T.G., J. Gelfand, R.B. Miles and H. Rabitz, A time domain photoacoustic study of the collisional relaxation of vibrationally excited H_2 124 (1988) 359
Kuśba, J. and B. Sipp, Temporal behavior of the rate for short-range energy transfer in fluid solution 124 (1988) 223

Lang, E.W., see W. Fink 124 (1988) 239
Lassier-Govers, B., see D. Grimbert 124 (1988) 187
Lavrik, N.L. and O.V. Nechaev, Magnetic modulation of fluorescence from radical-ion pair recombination products generated by photoinduced electron transfer reactions in polar media 124 (1988) 273
Le Calvé, J., see X. Ripoche 124 (1988) 305
Lévay, B., see L. Lévay 124 (1988) 155
Lévay, L., B. Lévay and A. Vértes, Isomer effect on the reactivity and inhibition capacity of nitrophenols and nitrophenolates towards ortho-positronium in methanol solutions 124 (1988) 155
Liptay, W., see R. Wortmann 124 (1988) 395
Lueck, H., see R. Menzel 124 (1988) 417

Maciejewski, A., see M. Szymański 124 (1988) 143
Märk, T.D., see J.J. Breen 124 (1988) 161
McConkey, J.W., see P.W. Zetner 124 (1988) 453
McConkey, R.L., see P.W. Zetner 124 (1988) 453
McGee, T.J., see J. Burris 124 (1988) 251
Menzel, R. and H. Lueck, Conformation-dependent excited state absorptions of 3,3″,5,5″-tetramethyl-para-terphenyl 124 (1988) 417
Meyer, H., see M. Breitenstein 124 (1988) 47
Miles, R.B., see T.G. Kreutz 124 (1988) 359
Molin, Yu.N., see S.N. Smirnov 124 (1988) 81
Mordziński, A., see J. Waluk 124 (1988) 103

Nakagawa, S., see H. Umemoto 124 (1988) 259
Nechaev, O.V., see N.L. Lavrik 124 (1988) 273

Oddershede, J., see P.W. Sengeløv 124 (1988) 371

Pascual, R., see A.M. Grisogono 124 (1988) 121
Penfold, J., see F. Fillaux 124 (1988) 425
Piuzzi, F., see X. Ripoche 124 (1988) 305

Rabitz, H., see T.G. Kreutz 124 (1988) 359
Radkowitsch, H., see W. Fink 124 (1988) 239
Ramondo, F., L. Bencivenni and V. Rossi, FT IR study of matrix isolated mixed metal fluorides $LiNaF_2$ and $CaSrF_4$ 124 (1988) 291
Ripoche, X., I. Dimicoli, J. le Calvé, F. Piuzzi and R. Botter, Resonance-enhanced multiphoton dissociation spectroscopy of the forbidden $\tilde{B}\rightarrow\tilde{X}$ transition of the gas phase chlorobenzene cation 124 (1988) 305
Rossi, V., see F. Ramondo 124 (1988) 291
Rowat, J. and J.P. Colpa, The lineshape of quadrupolar satellites in level anticrossing (LAC) optical nuclear polarization (ONP) spectra 124 (1988) 1

Rubahn, H.-G., see G. Gundlach 124 (1988) 131

Saile, V., see W. Gädeke 124 (1988) 113
Sarre, P.J. and C.J. Whitham, Electronic spectra of CH^+ involving "long-range" states 124 (1988) 439
Sato, S., see H. Umemoto 124 (1988) 259
Schmidtke, H.-H., see M.A. Atanasov 124 (1988) 205
Schweig, A., see M. Breitenstein 124 (1988) 47
Sengeløv, P.W. and J. Oddershede, Direct calculation of transition probabilities between excited states 124 (1988) 371
Sidis, V., see D. Grimbert 124 (1988) 187
Sipp, B., see J. Kuśba 124 (1988) 223
Smirnov, S.N., O.A. Anisimov and Yu.N. Molin, Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons 124 (1988) 81
Spanget-Larsen, J., see J. Waluk 124 (1988) 103
Steer, R.P., see M. Szymański 124 (1988) 143
Stephan, K., see J.J. Breen 124 (1988) 161
Stock, G. and W. Domcke, Model studies on the time-resolved measurement of excited-state vibrational dynamics and vibronic coupling 124 (1988) 227
Stręk, W., see J. Sztucki 124 (1988) 177
Sulston, K.W., A.T. Amos and S.G. Davison, Numerical studies of surface–ion neutralization 124 (1988) 411
Sztucki, J. and W. Stręk, Two-beam two-photon absorption in lanthanide(III) compounds 124 (1988) 177
Szymański, M., A. Maciejewski and R.P. Steer, Photophysics of thione triplets in solution: factors controlling the rates of radiationless decay 124 (1988) 143

Tadjeddine, M., J.P. Flament and C. Teichteil, Spin–orbit calculations of the molecular states of CH_3I^+, related to photofragmentation experiments 124 (1988) 13
Teichteil, C., see M. Tadjeddine 124 (1988) 13
Teitelbaum, H., Non-equilibrium thermal dissociation of diatomic molecules. I. Extraction of collision-induced rate constants from experimentally measured reaction rates as a function of temperature for ten diatomic molecules dilute in Ar 124 (1988) 55
Thulstrup, E.W., see J. Waluk 124 (1988) 103
Toennies, J.P., see G. Gundlach 124 (1988) 131
Tomasello, P., see A.M. Grisogono 124 (1988) 121
Tomkinson, J., see F. Fillaux 124 (1988) 425
Tsunashima, S., see H. Umemoto 124 (1988) 259

Umemoto, H., S. Nakagawa, S. Tsunashima and S. Sato, The reaction of H+HI and its isotopic variants 124 (1988) 259

Vértes, A., see L. Lévay 124 (1988) 155
Vollenweider, J.-K. and H. Fischer, Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories 124 (1988) 333
Von Niessen, W., see A.M. Grisogono 124 (1988) 121

Waluk, J., A. Mordziński, J. Spanget-Larsen and E.W. Thulstrup, The electronic spectra of some aza-derivatives of 1,2-benzanthracene 124 (1988) 103

Weigold, E., see A.M. Grisogono 124 (1988) 121
Westerveld, W.B., see P.W. Zetner 124 (1988) 453
Whitham, C.J., see P.J. Sarre 124 (1988) 439
Wortmann, R., K. Elich and W. Liptay, Excited state dipole moments and polarizabilities of centrocymmetric and dimeric molecules. III. Model calculations for 1,8-diphenyl-1,3,5,7-octatetraene 124 (1988) 395

Yano, R., Y. Fukuda and T. Hashi, Thermal conductivity measurement of water ethanol solutions by laser-induced transient grating method 124 (1988) 315
Yokoyama, K., see T. Fueno 124 (1988) 265

Zetner, P.W., M. Darrach, P. Hammond, W.B. Westerveld, R.L. McConkey and J.W. McConkey, Rotationally resolved electron-impact ionization of N_2 in a supersonic jet 124 (1988) 453
Zhu, X.R. and J.M. Harris, Influence of photoisomerization on saturated absorption of 3,3'-diethyloxadicarbocyanine iodide (DODCI) studied by diffraction from laser-induced, anharmonic thermal gratings 124 (1988) 321

LIST OF SUBJECTS

1 METHODS

1.1 Theoretical

1.1.1 Group theory and algebras
1.1.2 Classical mechanics
1.1.3 Quantized field theory
1.1.4 Many body and quasiparticle approaches *
1.1.5 Coupling schemes and perturbative treatments *
1.1.6 Relativistic quantum mechanics *
1.1.7 Transport quantum mechanics *
1.1.8 Equilibrium statistical mechanics
1.1.9 Statistical mechanics of stationary states
1.1.10 Non-equilibrium thermodynamic and hydrodynamic theories
1.1.11 Ab initio schemes for stationary properties *
1.1.12 Computational and simulation methods *
1.1.13 Molecular dynamics and scattering theory *

1.2 Experimental

1.2.1 Magnetic resonances *
1.2.2 Cyclotron resonance
1.2.3 Microwave spectroscopy
1.2.4 Infrared spectroscopy *
1.2.5 Raman spectroscopy
1.2.6 Visible and UV spectroscopy *
1.2.7 Fluorescence spectroscopy *
1.2.8 Photoelectron and Auger spectroscopy
1.2.9 X-ray spectroscopy *
1.2.10 Electron impact spectroscopy *
1.2.11 Laser methods *
1.2.12 Picosecond spectroscopy
1.2.13 Non-linear optical spectroscopy *
1.2.14 Synchrotron spectroscopies *
1.2.15 Coherent optical spectroscopy
1.2.16 Optical pumping *
1.2.17 Multiple resonance spectroscopy
1.2.18 Optoacoustic spectroscopy *
1.2.19 Atomic and molecular beam techniques *
1.2.20 Time-resolved experiments *
1.2.21 Mass spectrometry *
1.2.22 Radiolysis *
1.2.23 Mössbauer spectroscopy
1.2.24 X-ray, electron and neutron diffraction *
1.2.25 Neutron scattering *
1.2.26 Light scattering *
1.2.27 Field emission and field ionization
1.2.28 Measurement of macroscopic variables

2 OBJECTS

2.1 Bulk systems

2.1.1 Gases *
2.1.2 Supersonic beams *
2.1.3 Liquids neat
2.1.4 Liquid mixtures and solutions *
2.1.5 Crystals *
2.1.5.1 neat
2.1.5.2 mixed *
2.1.6 Glasses *
2.1.7 Liquid crystals
2.1.8 Polymers *
2.1.9 Semiconductors
2.1.10 Metals and alloys
2.1.11 Thin films
2.1.12 Surfaces *
2.1.13 Low-dimensional materials
2.1.14 Dielectrics
2.1.15 Plasmas *
2.1.16 Biological systems

2.2 Microscopic systems

2.2.1 Atoms *
2.2.2 Molecules (neutral and ionic) *
2.2.2.1 diatomic *
2.2.2.2 small polyatomics *
2.2.2.3 aromatics *
2.2.2.4 other large *
2.2.2.5 polymeric and biological
2.2.3 Molecular aggregates *
2.2.3.1 dimers *
2.2.3.2 van der Waals molecules
2.2.3.3 clusters
2.2.3.4 complexes *
2.2.4 Free radicals (including hydronium and muonium) *
2.2.5 Quasiparticles (including excitons)
2.2.6 Defects and impurities
2.2.7 Ions and charge carriers *

* Denotes subjects covered in this volume

3 PHENOMENA

3.1 Molecular structure *
3.2 Vibrations and rotations of molecules *
3.3 Electronic structure and states *
3.4 Electric and magnetic properties *
3.5 Spin splittings *
3.6 Optical activity
3.7 Molecular interactions *
3.8 Spectral bandshapes and intensities *
3.9 Coupling of electronic and nuclear motion *
3.10 Energy transfer processes *
3.11 Molecular photophysical processes *
3.12 Intramolecular dynamics *
3.12.1 radiationless transitions *
3.12.2 vibrational energy redistribution (including vibrational dissociation) *
3.13 Luminescence spectra, yields and lifetimes *
3.14 Coherence loss processes
3.15 Non-linear responses (including optical)
3.16 Multiphoton phenomena *
3.17 Reactions (including dissociation) *
3.17.1 gas phase *
3.17.2 condensed phase *
3.17.3 photochemical *
3.18 Tunnelling *
3.19 Electron transfer *
3.20 Positron annihilation *
3.21 Ionization (including Rydberg states) *
3.22 Molecular motion (including diffusive) *
3.23 Isotopic effects *
3.24 Fluctuations and noise
3.25 Collective motion and excitations
3.26 Surface effects and catalysis
3.27 Thermodynamic and transport properties *
3.28 Structure of solids and liquids *
3.29 Critical phenomena
3.30 Phase transitions

SUBJECT INDEX TO VOLUME 124

METHODS

Theoretical

Many body and quasiparticle approaches

Orbital momentum distributions and binding energies for the complete valence shell of molecular iodine, A.M. Grisogono, R. Pascual, E. Weigold, A. Bawagan, C.E. Brion, P. Tomasello and W. von Niessen 124 (1988) 121
Direct calculation of transition probabilities between excited states, P.W. Sengeløv and J. Oddershede 124 (1988) 371

Coupling schemes and perturbative treatments

The lineshape of quadrupolar satellites in level anticrossing (LAC) optical nuclear polarization (ONP) spectra, J. Rowat and J.P. Colpa 124 (1988) 1
Two-beam two-photon absorption in lanthanide(III) compounds, J. Sztucki and W. Stręk 124 (1988) 177
The angular overlap model for transition metal compounds forming extended structures, M.A. Atanasov and H.-H. Schmidtke 124 (1988) 205
Numerical studies of surface–ion neutralization, K.W. Sulston, A.T. Amos and S.G. Davison 124 (1988) 411

Relativistic quantum mechanics

Spin–orbit calculations of the molecular states of CH_3I^+, related to photofragmentation experiments, M. Tadjeddine, J.P. Flament and C. Teichteil 124 (1988) 13

Transport quantum mechanics

Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories, J.-K. Vollenweider and H. Fischer 124 (1988) 333

Ab initio schemes for stationary properties

Spin–orbit calculations of the molecular states of CH_3I^+, related to photofragmentation experiments, M. Tadjeddine, J.P. Flament and C. Teichteil 124 (1988) 13
Structural and vibrational properties of neopentane and tetramethylsilane using ab initio MO calculations, J.R. Guth and A.C. Hess 124 (1988) 29
Ab initio MO studies of the decomposition of energetic materials. I. Hydrogen transfer in TNT and in model systems, J.R. Cox and I.H. Hillier 124 (1988) 39
Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47
Mechanism of the reaction $NH(^1\Delta)+NO\rightarrow N_2O+H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265
Direct calculation of transition probabilities between excited states, P.W. Sengeløv and J. Oddershede 124 (1988) 371

On the dissociation energies and bonding in $NiCO^+$ and $TiCO^+$, C.W. Bauschlicher Jr. and L.A. Barnes 124 (1988) 383

Computational and simulation methods

Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47

Non-equilibrium thermal dissociation of diatomic molecules. I. Extraction of collision-induced rate constants from experimentally measured reaction rates as a function of temperature for ten diatomic molecules dilute in Ar, H. Teitelbaum 124 (1988) 55

Model potentials and related diabatic states for the $H^+ + O_2$ collisional system, D. Grimbert, B. Lassier-Govers and V. Sidis 124 (1988) 187

The angular overlap model for transition metal compounds forming extended structures, M.A. Atanasov and H.-H. Schmidtke 124 (1988) 205

Temporal behavior of the rate for short-range energy transfer in fluid solution, J. Kuśba and B. Sipp 124 (1988) 223

Mechanism of the reaction $NH^1\Delta) + NO \rightarrow N_2O + H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265

Excited state dipole moments and polarizabilities of centrocymmetric and dimeric molecules. III. Model calculations for 1,8-diphenyl-1,3,5,7-octatetraene, R. Wortmann, K. Elich and W. Liptay 124 (1988) 395

Numerical studies of surface–ion neutralization, K.W. Sulston, A.T. Amos and S.G. Davison 124 (1988) 411

Conformation-dependent excited state absorptions of 3,3″,5,5″-tetramethyl-para-terphenyl, R. Menzel and H. Lueck 124 (1988) 417

Molecular dynamics and scattering theory

Rate constants for the rotational excitation of ammonia colliding with rotationally excited hydrogen, G.D. Billing and G.H.F. Diercksen 124 (1988) 77

Model studies on the time-resolved measurement of excited-state vibrational dynamics and vibronic coupling, G. Stock and W. Domcke 124 (1988) 227

Theoretical study of the dissociation of the HF^+ and DF^+ ions in the $B^2\Sigma^+$ state by classical trajectories, I. Cacelli 124 (1988) 347

A time domain photoacoustic study of the collisional relaxation of vibrationally excited H_2, T.G. Kreutz, J. Gelfand, R.B. Miles and H. Rabitz 124 (1988) 359

Experimental

Magnetic resonances

Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons, S.N. Smirnov, O.A. Anisimov and Yu.N. Molin 124 (1988) 81

The *p*, *T*, *c* dependence of deuterium spin–lattice relaxation times in undercooled NaCl/D_2O and NaI/D_2O solutions, W. Fink, H. Radkowitsch and E.W. Lang 124 (1988) 239

Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories, J.-K. Vollenweider and H. Fischer 124 (1988) 333

Infrared spectroscopy

Homogeneous and heterogeneous CO chemical kinetics in liquid-nitrogen cooled 5% CO–He discharges, S. De Benedictis, F. Cramarossa and O.V. Achasov 124 (1988) 91

Visible and UV spectroscopy

Homogeneous and heterogeneous CO chemical kinetics in liquid-nitrogen cooled 5% CO–He discharges, S. De Benedictis, F. Cramarossa and O.V. Achasov 124 (1988) 91

The electronic spectra of some aza-derivatives of 1,2-benzanthracene, J. Waluk, A. Mordziński, J. Spanget-Larsen and E.W. Thulstrup 124 (1988) 103

Rotational and vibrational energy effect on energy-resolved emission of anthracene and 9-cyanoanthracene, A. Amirav 124 (1988) 163

Collisional deactivation rates for $A^2\Sigma^+(v'=1)$ state of OH, J. Burris, J.J. Butler, T.J. McGee and W.S. Heaps 124 (1988) 251

The $\tilde{A}\,^1B_{2u}$–$\tilde{X}\,^1A_g$ electronic absorption spectrum of 1,2,4,5-tetrafluorobenzene: rotational band contour and vibrational analysis relating to non-planarity in the $\tilde{A}$ state, J.M. Hollas and M.Z. bin Hussein 124 (1988) 297

Resonance-enhanced multiphoton dissociation spectroscopy of the forbidden $\tilde{B}\rightarrow\tilde{X}$ transition of the gas phase chlorobenzene cation, X. Ripoche, I. Dimicoli, J. le Calvé, F. Piuzzi and R. Botter 124 (1988) 305

Direct calculation of transition probabilities between excited states, P.W. Sengeløv and J. Oddershede 124 (1988) 371

Excited state dipole moments and polarizabilities of centrocymmetric and dimeric molecules. III. Model calculations for 1,8-diphenyl-1,3,5,7-octatetraene, R. Wortmann, K. Elich and W. Liptay 124 (1988) 395

Conformation-dependent excited state absorptions of 3,3″,5,5″-tetramethyl-para-terphenyl, R. Menzel and H. Lueck 124 (1988) 417

Electronic spectra of CH^+ involving "long-range" states, P.J. Sarre and C.J. Whitham 124 (1988) 439

Fluorescence spectroscopy

The electronic spectra of some aza-derivatives of 1,2-benzanthracene, J. Waluk, A. Mordziński, J. Spanget-Larsen and E.W. Thulstrup 124 (1988) 103

Rotational and vibrational energy effect on energy-resolved emission of anthracene and 9-cyanoanthracene, A. Amirav 124 (1988) 163

Temporal behavior of the rate for short-range energy transfer in fluid solution, J. Kuśba and B. Sipp 124 (1988) 223

Collisional deactivation rates for $A^2\Sigma^+(v'=1)$ state of OH, J. Burris, J.J. Butler, T.J. McGee and W.S. Heaps 124 (1988) 251

Magnetic modulation of fluorescence from radical-ion pair recombination products generated by photoinduced electron transfer reactions in polar media, N.L. Lavrik and O.V. Nechaev 124 (1988) 273

Excited state dipole moments and polarizabilities of centrocymmetric and dimeric molecules. III. Model calculations for 1,8-diphenyl-1,3,5,7-octatetraene, R. Wortmann, K. Elich and W. Liptay 124 (1988) 395

Rotationally resolved electron-impact ionization of N_2 in a supersonic jet, P.W. Zetner, M. Darrach, P. Hammond, W.B. Westerveld, R.L. McConkey and J.W. McConkey 124 (1988) 453

X-ray spectroscopy

Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy, W. Gädeke, E.E. Koch, G. Dräger, R. Frahm and V. Saile 124 (1988) 113

Electron impact spectroscopy
Orbital momentum distributions and binding energies for the complete valence shell of molecular iodine, A.M. Grisogono, R. Pascual, E. Weigold, A. Bawagan, C.E. Brion, P. Tomasello and W. von Niessen 124 (1988) 121
Theoretical study of the dissociation of the HF^+ and DF^+ ions in the $B^2\Sigma^+$ state by classical trajectories, I. Cacelli 124 (1988) 347

Laser methods
Cross sections for translational and rotational relaxation in Li/Li_2 and Na/Na_2 molecular beams, G. Gundlach, E.L. Knuth, H.-G. Rubahn and J.P. Toennies 124 (1988) 131
Photophysics of thione triplets in solution: factors controlling the rates of radiationless decay, M. Szymański, A. Maciejewski and R.P. Steer 124 (1988) 143
Collisional deactivation rates for $A^2\Sigma^+(v'=1)$ state of OH, J. Burris, J.J. Butler, T.J. McGee and W.S. Heaps 124 (1988) 251
Resonance-enhanced multiphoton dissociation spectroscopy of the forbidden $\tilde{B}\rightarrow\tilde{X}$ transition of the gas phase chlorobenzene cation, X. Ripoche, I. Dimicoli, J. le Calvé, F. Piuzzi and R. Botter 124 (1988) 305
Thermal conductivity measurement of water ethanol solutions by laser-induced transient grating method, R. Yano, Y. Fukuda and T. Hashi 124 (1988) 315
Influence of photoisomerization on saturated absorption of 3,3′-diethyloxadicarbocyanine iodide (DODCI) studied by diffraction from laser-induced, anharmonic thermal gratings, X.R. Zhu and J.M. Harris 124 (1988) 321
Rotationally resolved electron-impact ionization of N_2 in a supersonic jet, P.W. Zetner, M. Darrach, P. Hammond, W.B. Westerveld, R.L. McConkey and J.W. McConkey 124 (1988) 453

Non-linear optical spectroscopy
Two-beam two-photon absorption in lanthanide(III) compounds, J. Sztucki and W. Stręk 124 (1988) 177
Influence of photoisomerization on saturated absorption of 3,3′-diethyloxadicarbocyanine iodide (DODCI) studied by diffraction from laser-induced, anharmonic thermal gratings, X.R. Zhu and J.M. Harris 124 (1988) 321
Direct calculation of transition probabilities between excited states, P.W. Sengeløv and J. Oddershede 124 (1988) 371
Conformation-dependent excited state absorptions of 3,3″,5,5″-tetramethyl-para-terphenyl, R. Menzel and H. Lueck 124 (1988) 417

Synchrotron spectroscopies
Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy, W. Gädeke, E.E. Koch, G. Dräger, R. Frahm and V. Saile 124 (1988) 113

Optical pumping
A time domain photoacoustic study of the collisional relaxation of vibrationally excited H_2, T.G. Kreutz, J. Gelfand, R.B. Miles and H. Rabitz 124 (1988) 359

Optoacoustic spectroscopy
A time domain photoacoustic study of the collisional relaxation of vibrationally excited H_2, T.G. Kreutz, J. Gelfand, R.B. Miles and H. Rabitz 124 (1988) 359

Atomic and molecular beam techniques
Cross sections for translational and rotational relaxation in Li/Li_2 and Na/Na_2 molecular beams, G. Gundlach, E.L. Knuth, H.-G. Rubahn and J.P. Toennies 124 (1988) 131
Electronic spectra of CH^+ involving "long-range" states, P.J. Sarre and C.J. Whitham 124 (1988) 439

Time-resolved experiments
Photophysics of thione triplets in solution: factors controlling the rates of radiationless decay, M. Szymański, A. Maciejewski and R.P. Steer 124 (1988) 143
Isomer effect on the reactivity and inhibition capacity of nitrophenols and nitrophenolates towards ortho-positronium in methanol solutions, L. Lévay, B. Lévay and A. Vértes 124 (1988) 155
The reaction of H + HI and its isotopic variants, H. Umemoto, S. Nakagawa, S. Tsunashima and S. Sato 124 (1988) 259
Magnetic modulation of fluorescence from radical-ion pair recombination products generated by photoinduced electron transfer reactions in polar media, N.L. Lavrik and O.V. Nechaev 124 (1988) 273
Thermal conductivity measurement of water ethanol solutions by laser-induced transient grating method, R. Yano, Y. Fukuda and T. Hashi 124 (1988) 315

Mass spectrometry
Homogeneous and heterogeneous CO chemical kinetics in liquid-nitrogen cooled 5% CO–He discharges, S. De Benedictis, F. Cramarossa and O.V. Achasov 124 (1988) 91
Mechanism of the reaction $NH(^1\Delta) + NO \rightarrow N_2O + H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265

Radiolysis
Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons, S.N. Smirnov, O.A. Anisimov and Yu.N. Molin 124 (1988) 81
The reaction of H + HI and its isotopic variants, H. Umemoto, S. Nakagawa, S. Tsunashima and S. Sato 124 (1988) 259

X-ray, electron and neutron diffraction
Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47

Neutron scattering
Proton dynamics in the hydrogen bond. The inelastic neutron scattering spectrum of potassium hydrogen carbonate at 5 K, F. Fillaux, J. Tomkinson and J. Penfold 124 (1988) 425

Light scattering
Thermal conductivity measurement of water ethanol solutions by laser-induced transient grating method, R. Yano, Y. Fukuda and T. Hashi 124 (1988) 315

OBJECTS

Bulk systems

Gases
Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47

Rate constants for the rotational excitation of ammonia colliding with rotationally excited hydrogen, G.D. Billing and G.H.F. Diercksen 124 (1988) 77
Collisional deactivation rates for $A^2\Sigma^+(v'=1)$ state of OH, J. Burris, J.J. Butler, T.J. McGee and W.S. Heaps 124 (1988) 251
The reaction of H+HI and its isotopic variants, H. Umemoto, S. Nakagawa, S. Tsunashima and S. Sato 124 (1988) 259
Resonance-enhanced multiphoton dissociation spectroscopy of the forbidden $\tilde{B}\rightarrow\tilde{X}$ transition of the gas phase chlorobenzene cation, X. Ripoche, I. Dimicoli, J. le Calvé, F. Piuzzi and R. Botter 124 (1988) 305

Supersonic beams
Rotational and vibrational energy effect on energy-resolved emission of anthracene and 9-cyanoanthracene, A. Amirav 124 (1988) 163
Rotationally resolved electron-impact ionization of N_2 in a supersonic jet, P.W. Zetner, M. Darrach, P. Hammond, W.B. Westerveld, R.L. McConkey and J.W. McConkey 124 (1988) 453

Liquid mixtures and solutions
Temporal behavior of the rate for short-range energy transfer in fluid solution, J. Kuśba and B. Sipp 124 (1988) 223
The *p*, *T*, *c* dependence of deuterium spin–lattice relaxation times in undercooled NaCl/D_2O and NaI/D_2O solutions, W. Fink, H. Radkowitsch and E.W. Lang 124 (1988) 239
Thermal conductivity measurement of water ethanol solutions by laser-induced transient grating method, R. Yano, Y. Fukuda and T. Hashi 124 (1988) 315
Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories, J.-K. Vollenweider and H. Fischer 124 (1988) 333

Crystals
Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy, W. Gädeke, E.E. Koch, G. Dräger, R. Frahm and V. Saile 124 (1988) 113
Proton dynamics in the hydrogen bond. The inelastic neutron scattering spectrum of potassium hydrogen carbonate at 5 K, F. Fillaux, J. Tomkinson and J. Penfold 124 (1988) 425

–mixed
The lineshape of quadrupolar satellites in level anticrossing (LAC) optical nuclear polarization (ONP) spectra, J. Rowat and J.P. Colpa 124 (1988) 1

Glasses
Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons, S.N. Smirnov, O.A. Anisimov and Yu.N. Molin 124 (1988) 81
Model studies on the time-resolved measurement of excited-state vibrational dynamics and vibronic coupling, G. Stock and W. Domcke 124 (1988) 227

Polymers
The electronic spectra of some aza-derivatives of 1,2-benzanthracene, J. Waluk, A. Mordziński, J. Spanget-Larsen and E.W. Thulstrup 124 (1988) 103
The angular overlap model for transition metal compounds forming extended structures, M.A. Atanasov and H.-H. Schmidtke 124 (1988) 205

Surfaces
Numerical studies of surface–ion neutralization, K.W. Sulston, A.T. Amos and S.G. Davison 124 (1988) 411

Plasmas
Homogeneous and heterogeneous CO chemical kinetics in liquid-nitrogen cooled 5% CO–He discharges, S. De Benedictis, F. Cramarossa and O.V. Achasov 124 (1988) 91

Microscopic systems

Atoms
Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47
Cross sections for translational and rotational relaxation in Li/Li_2 and Na/Na_2 molecular beams, G. Gundlach, E.L. Knuth, H.-G. Rubahn and J.P. Toennies 124 (1988) 131

Molecules (neutral and ionic)
Structural and vibrational properties of neopentane and tetramethylsilane using ab initio MO calculations, J.R. Guth and A.C. Hess 124 (1988) 29
Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47
Temporal behavior of the rate for short-range energy transfer in fluid solution, J. Kuśba and B. Sipp 124 (1988) 223
Model studies on the time-resolved measurement of excited-state vibrational dynamics and vibronic coupling, G. Stock and W. Domcke 124 (1988) 227
Direct calculation of transition probabilities between excited states, P.W. Sengeløv and J. Oddershede 124 (1988) 371

–diatomic
Non-equilibrium thermal dissociation of diatomic molecules. I. Extraction of collision-induced rate constants from experimentally measured reaction rates as a function of temperature for ten diatomic molecules dilute in Ar, H. Teitelbaum 124 (1988) 55
Orbital momentum distributions and binding energies for the complete valence shell of molecular iodine, A.M. Grisogono, R. Pascual, E. Weigold, A. Bawagan, C.E. Brion, P. Tomasello and W. von Niessen 124 (1988) 121
Theoretical study of the dissociation of the HF^+ and DF^+ ions in the $B^2\Sigma^+$ state by classical trajectories, I. Cacelli 124 (1988) 347
Electronic spectra of CH^+ involving "long-range" states, P.J. Sarre and C.J. Whitham 124 (1988) 439
Rotationally resolved electron-impact ionization of N_2 in a supersonic jet, P.W. Zetner, M. Darrach, P. Hammond, W.B. Westerveld, R.L. McConkey and J.W. McConkey 124 (1988) 453

–small polyatomics
Spin–orbit calculations of the molecular states of CH_3I^+, related to photofragmentation experiments, M. Tadjeddine, J.P. Flament and C. Teichteil 124 (1988) 13
Rate constants for the rotational excitation of ammonia colliding with rotationally excited hydrogen, G.D. Billing and G.H.F. Diercksen 124 (1988) 77
Model potentials and related diabatic states for the $H^+ + O_2$ collisional system, D. Grimbert, B. Lassier-Govers and V. Sidis 124 (1988) 187

On the dissociation energies and bonding in $NiCO^+$ and $TiCO^+$, C.W. Bauschlicher Jr. and L.A. Barnes 124 (1988) 383

–aromatics

The electronic spectra of some aza-derivatives of 1,2-benzanthracene, J. Waluk, A. Mordziński, J. Spanget-Larsen and E.W. Thulstrup 124 (1988) 103

Photophysics of thione triplets in solution: factors controlling the rates of radiationless decay, M. Szymański, A. Maciejewski and R.P. Steer 124 (1988) 143

Rotational and vibrational energy effect on energy-resolved emission of anthracene and 9-cyanoanthracene, A. Amirav 124 (1988) 163

The $\tilde{A}\,^1B_{2u}$–$\tilde{X}\,^1A_g$ electronic absorption spectrum of 1,2,4,5-tetrafluorobenzene: rotational band contour and vibrational analysis relating to non-planarity in the $\tilde{A}$ state, J.M. Hollas and M.Z. bin Hussein 124 (1988) 297

Resonance-enhanced multiphoton dissociation spectroscopy of the forbidden $\tilde{B}\rightarrow\tilde{X}$ transition of the gas phase chlorobenzene cation, X. Ripoche, I. Dimicoli, J. le Calvé, F. Piuzzi and R. Botter 124 (1988) 305

Conformation-dependent excited state absorptions of 3,3″,5,5″-tetramethyl-para-terphenyl, R. Menzel and H. Lueck 124 (1988) 417

–other large

Ab initio MO studies of the decomposition of energetic materials. I. Hydrogen transfer in TNT and in model systems, J.R. Cox and I.H. Hillier 124 (1988) 39

Molecular aggregates

–dimers

Cross sections for translational and rotational relaxation in Li/Li_2 and Na/Na_2 molecular beams, G. Gundlach, E.L. Knuth, H.-G. Rubahn and J.P. Toennies 124 (1988) 131

Proton dynamics in the hydrogen bond. The inelastic neutron scattering spectrum of potassium hydrogen carbonate at 5 K, F. Fillaux, J. Tomkinson and J. Penfold 124 (1988) 425

–complexes

Two-beam two-photon absorption in lanthanide(III) compounds, J. Sztucki and W. Stręk 124 (1988) 177

The angular overlap model for transition metal compounds forming extended structures, M.A. Atanasov and H.-H. Schmidtke 124 (1988) 205

Magnetic modulation of fluorescence from radical-ion pair recombination products generated by photoinduced electron transfer reactions in polar media, N.L. Lavrik and O.V. Nechaev 124 (1988) 273

Free radicals (including hydronium and muonium)

Collisional deactivation rates for $A^2\Sigma^+(v'=1)$ state of OH, J. Burris, J.J. Butler, T.J. McGee and W.S. Heaps 124 (1988) 251

Mechanism of the reaction $NH(^1\Delta)+NO\rightarrow N_2O+H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265

Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories, J.-K. Vollenweider and H. Fischer 124 (1988) 333

Ions and charge carriers
Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons, S.N. Smirnov, O.A. Anisimov and Yu.N. Molin 124 (1988) 81
2.14Isomer effect on the reactivity and inhibition capacity of nitrophenols and nitrophenolates towards ortho-positronium in methanol solutions, L. Lévay, B. Lévay and A. Vértes 124 (1988) 155

PHENOMENA

Molecular structure
Structural and vibrational properties of neopentane and tetramethylsilane using ab initio MO calculations, J.R. Guth and A.C. Hess 124 (1988) 29
Ab initio MO studies of the decomposition of energetic materials. I. Hydrogen transfer in TNT and in model systems, J.R. Cox and I.H. Hillier 124 (1988) 39
Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons, S.N. Smirnov, O.A. Anisimov and Yu.N. Molin 124 (1988) 81
Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy, W. Gädeke, E.E. Koch, G. Dräger, R. Frahm and V. Saile 124 (1988) 113
FT IR study of matrix isolated mixed metal fluorides $LiNaF_2$ and $CaSrF_4$, F. Ramondo, L. Bencivenni and V. Rossi 124 (1988) 291
The $\tilde{A}\,^1B_{2u}$–$\tilde{X}\,^1A_g$ electronic absorption spectrum of 1,2,4,5-tetrafluorobenzene: rotational band contour and vibrational analysis relating to non-planarity in the $\tilde{A}$ state, J.M. Hollas and M.Z. bin Hussein 124 (1988) 297
On the dissociation energies and bonding in $NiCO^+$ and $TiCO^+$, C.W. Bauschlicher Jr. and L.A. Barnes 124 (1988) 383

Vibrations and rotations of molecules
Structural and vibrational properties of neopentane and tetramethylsilane using ab initio MO calculations, J.R. Guth and A.C. Hess 124 (1988) 29
Homogeneous and heterogeneous CO chemical kinetics in liquid-nitrogen cooled 5% CO–He discharges, S. De Benedictis, F. Cramarossa and O.V. Achasov 124 (1988) 91
Rotational and vibrational energy effect on energy-resolved emission of anthracene and 9-cyanoanthracene, A. Amirav 124 (1988) 163
Resonance-enhanced multiphoton dissociation spectroscopy of the forbidden $\tilde{B}\rightarrow\tilde{X}$ transition of the gas phase chlorobenzene cation, X. Ripoche, I. Dimicoli, J. le Calvé, F. Piuzzi and R. Botter 124 (1988) 305

Electronic structure and states
Spin–orbit calculations of the molecular states of CH_3I^+, related to photofragmentation experiments, M. Tadjeddine, J.P. Flament and C. Teichteil 124 (1988) 13
Molecular electron pair distributions and electron repulsion energies, M. Breitenstein, H. Meyer and A. Schweig 124 (1988) 47
The electronic spectra of some aza-derivatives of 1,2-benzanthracene, J. Waluk, A. Mordziński, J. Spanget-Larsen and E.W. Thulstrup 124 (1988) 103
Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy, W. Gädeke, E.E. Koch, G. Dräger, R. Frahm and V. Saile 124 (1988) 113

Orbital momentum distributions and binding energies for the complete valence shell of molecular iodine, A.M. Grisogono, R. Pascual, E. Weigold, A. Bawagan, C.E. Brion, P. Tomasello and W. von Niessen 124 (1988) 121
The angular overlap model for transition metal compounds forming extended structures, M.A. Atanasov and H.-H. Schmidtke 124 (1988) 205
Mechanism of the reaction $NH(^1\Delta)+NO\rightarrow N_2O+H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265
On the dissociation energies and bonding in $NiCO^+$ and $TiCO^+$, C.W. Bauschlicher Jr. and L.A. Barnes 124 (1988) 383
Numerical studies of surface–ion neutralization, K.W. Sulston, A.T. Amos and S.G. Davison 124 (1988) 411
Conformation-dependent excited state absorptions of 3,3″,5,5″-tetramethyl-para-terphenyl, R. Menzel and H. Lueck 124 (1988) 417
Electronic spectra of CH^+ involving "long-range" states, P.J. Sarre and C.J. Whitham 124 (1988) 439

Electric and magnetic properties
The lineshape of quadrupolar satellites in level anticrossing (LAC) optical nuclear polarization (ONP) spectra, J. Rowat and J.P. Colpa 124 (1988) 1
Application of the OD ESR method for studying the molecular structure of excess electron trap in γ-irradiated hydrocarbons, S.N. Smirnov, O.A. Anisimov and Yu.N. Molin 124 (1988) 81

Spin splittings
Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories, J.-K. Vollenweider and H. Fischer 124 (1988) 333

Molecular interactions
Model potentials and related diabatic states for the $H^+ + O_2$ collisional system, D. Grimbert, B. Lassier-Govers and V. Sidis 124 (1988) 187
A time domain photoacoustic study of the collisional relaxation of vibrationally excited H_2, T.G. Kreutz, J. Gelfand, R.B. Miles and H. Rabitz 124 (1988) 359
On the dissociation energies and bonding in $NiCO^+$ and $TiCO^+$, C.W. Bauschlicher Jr. and L.A. Barnes 124 (1988) 383

Spectral bandshapes and intensities
The lineshape of quadrupolar satellites in level anticrossing (LAC) optical nuclear polarization (ONP) spectra, J. Rowat and J.P. Colpa 124 (1988) 1
The $\tilde{A}\,^1B_{2u}$–$\tilde{X}\,^1A_g$ electronic absorption spectrum of 1,2,4,5-tetrafluorobenzene: rotational band contour and vibrational analysis relating to non-planarity in the $\tilde{A}$ state, J.M. Hollas and M.Z. bin Hussein 124 (1988) 297
Excited state dipole moments and polarizabilities of centrocymmetric and dimeric molecules. III. Model calculations for 1,8-diphenyl-1,3,5,7-octatetraene, R. Wortmann, K. Elich and W. Liptay 124 (1988) 395
Proton dynamics in the hydrogen bond. The inelastic neutron scattering spectrum of potassium hydrogen carbonate at 5 K, F. Fillaux, J. Tomkinson and J. Penfold 124 (1988) 425

Coupling of electronic and nuclear motion
Model potentials and related diabatic states for the $H^+ + O_2$ collisional system, D. Grimbert, B. Lassier-Govers and V. Sidis 124 (1988) 187

Model studies on the time-resolved measurement of excited-state vibrational dynamics and vibronic coupling, G. Stock and W. Domcke 124 (1988) 227
Theoretical study of the dissociation of the HF^+ and DF^+ ions in the $B^2\Sigma^+$ state by classical trajectories, I. Cacelli 124 (1988) 347
Excited state dipole moments and polarizabilities of centrocymmetric and dimeric molecules. III. Model calculations for 1,8-diphenyl-1,3,5,7-octatetraene, R. Wortmann, K. Elich and W. Liptay 124 (1988) 395

Energy transfer processes
Non-equilibrium thermal dissociation of diatomic molecules. I. Extraction of collision-induced rate constants from experimentally measured reaction rates as a function of temperature for ten diatomic molecules dilute in Ar, H. Teitelbaum 124 (1988) 55
Rate constants for the rotational excitation of ammonia colliding with rotationally excited hydrogen, G.D. Billing and G.H.F. Diercksen 124 (1988) 77
Temporal behavior of the rate for short-range energy transfer in fluid solution, J. Kuśba and B. Sipp 124 (1988) 223
A time domain photoacoustic study of the collisional relaxation of vibrationally excited H_2, T.G. Kreutz, J. Gelfand, R.B. Miles and H. Rabitz 124 (1988) 359

Molecular photophysical processes
The lineshape of quadrupolar satellites in level anticrossing (LAC) optical nuclear polarization (ONP) spectra, J. Rowat and J.P. Colpa 124 (1988) 1
Spin–orbit calculations of the molecular states of CH_3I^+, related to photofragmentation experiments, M. Tadjeddine, J.P. Flament and C. Teichteil 124 (1988) 13
Model studies on the time-resolved measurement of excited-state vibrational dynamics and vibronic coupling, G. Stock and W. Domcke 124 (1988) 227
Influence of photoisomerization on saturated absorption of 3,3′-diethyloxadicarbocyanine iodide (DODCI) studied by diffraction from laser-induced, anharmonic thermal gratings, X.R. Zhu and J.M. Harris 124 (1988) 321
Electronic spectra of CH^+ involving "long-range" states, P.J. Sarre and C.J. Whitham 124 (1988) 439

Intramolecular dynamics

–radiationless transitions
Photophysics of thione triplets in solution: factors controlling the rates of radiationless decay, M. Szymański, A. Maciejewski and R.P. Steer 124 (1988) 143

–vibrational energy redistribution (including vibrational dissociation)
Non-equilibrium thermal dissociation of diatomic molecules. I. Extraction of collision-induced rate constants from experimentally measured reaction rates as a function of temperature for ten diatomic molecules dilute in Ar, H. Teitelbaum 124 (1988) 55

Luminescence spectra, yields and lifetimes
Photophysics of thione triplets in solution: factors controlling the rates of radiationless decay, M. Szymański, A. Maciejewski and R.P. Steer 124 (1988) 143
Magnetic modulation of fluorescence from radical-ion pair recombination products generated by photoinduced electron transfer reactions in polar media, N.L. Lavrik and O.V. Nechaev 124 (1988) 273

Multiphoton phenomena
Two-beam two-photon absorption in lanthanide(III) compounds, J. Sztucki and W. Stręk 124 (1988) 177

Reactions (including dissociation)
Mechanism of the reaction $NH(^1\Delta)+NO\rightarrow N_2O+H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265

–gas phase
Non-equilibrium thermal dissociation of diatomic molecules. I. Extraction of collision-induced rate constants from experimentally measured reaction rates as a function of temperature for ten diatomic molecules dilute in Ar, H. Teitelbaum 124 (1988) 55
The reaction of H + HI and its isotopic variants, H. Umemoto, S. Nakagawa, S. Tsunashima and S. Sato 124 (1988) 259
Mechanism of the reaction $NH(^1\Delta)+NO\rightarrow N_2O+H$ in the gas phase, T. Fueno, M. Fukuda and K. Yokoyama 124 (1988) 265

–condensed phase
Absolute chemically induced nuclear polarizations and yields from geminate radical pair reactions. A test of high-field radical pair theories, J.-K. Vollenweider and H. Fischer 124 (1988) 333

–photochemical
Influence of photoisomerization on saturated absorption of 3,3′-diethyloxadicarbocyanine iodide (DODCI) studied by diffraction from laser-induced, anharmonic thermal gratings, X.R. Zhu and J.M. Harris 124 (1988) 321

Tunnelling
Ab initio MO studies of the decomposition of energetic materials. I. Hydrogen transfer in TNT and in model systems, J.R. Cox and I.H. Hillier 124 (1988) 39

Electron transfer
Model potentials and related diabatic states for the $H^+ + O_2$ collisional system, D. Grimbert, B. Lassier-Govers and V. Sidis 124 (1988) 187
Magnetic modulation of fluorescence from radical-ion pair recombination products generated by photoinduced electron transfer reactions in polar media, N.L. Lavrik and O.V. Nechaev 124 (1988) 273
Numerical studies of surface–ion neutralization, K.W. Sulston, A.T. Amos and S.G. Davison 124 (1988) 411

Positron annihilation
Isomer effect on the reactivity and inhibition capacity of nitrophenols and nitrophenolates towards ortho-positronium in methanol solutions, L. Lévay, B. Lévay and A. Vértes 124 (1988) 155

Ionization (including Rydberg states)
Orbital momentum distributions and binding energies for the complete valence shell of molecular iodine, A.M. Grisogono, R. Pascual, E. Weigold, A. Bawagan, C.E. Brion, P. Tomasello and W. von Niessen 124 (1988) 121

Rotationally resolved electron-impact ionization of N_2 in a supersonic jet, P.W. Zetner, M. Darrach, P. Hammond, W.B. Westerveld, R.L. McConkey and J.W. McConkey 124 (1988) 453

Molecular motion (including diffusive)

The p, T, c dependence of deuterium spin–lattice relaxation times in undercooled NaCl/D_2O and NaI/D_2O solutions, W. Fink, H. Radkowitsch and E.W. Lang 124 (1988) 239

Isotopic effects

The reaction of H + HI and its isotopic variants, H. Umemoto, S. Nakagawa, S. Tsunashima and S. Sato 124 (1988) 259

Thermodynamic and transport properties

Thermal conductivity measurement of water ethanol solutions by laser-induced transient grating method, R. Yano, Y. Fukuda and T. Hashi 124 (1988) 315

Structure of solids and liquids

Electronic structure and local geometry of $Na_2[Fe(CN)_5NO]\cdot 2H_2O$ single crystals investigated by polarization-dependent X-ray absorption spectroscopy, W. Gädeke, E.E. Koch, G. Dräger, R. Frahm and V. Saile 124 (1988) 113